REMARKS

Claims 1, 5-9, 17, and 21-25 are pending in the present application. Claims 2, 3, 10-16, 18, 19, and 26-32 are canceled. Claims 1, 5, 6, 8, 9, 17, 21, 22, 24, and 25 are amended. Claims 33 and 34 are added. Support for the amendments may be found on at least page 15, line 29, to page 19, line 24; Figures 8, 9A, and 9B. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 102, Anticipation

The Office Action rejects claims 1, 5-6, 8-9, 17, 21-22, and 24-25 under 35 U.S.C. § 102 as being anticipated by *Coffey et al.* (U.S. Patent No. 5,583,725). This rejection is respectfully traversed.

Coffey teaches a spin valve magnetoresistive (SVMR) sensor for magnetic recording systems. See *Coffey*, Abstract, col. 3, lines 16-40. Primarily, *Coffey* teaches that he SVMR sensor is used for magnetic disk heads, although *Coffey* does nominally mention that the SVMR sensor may be applicable to other magnetic recording systems, such as a magnetic tape recording system. See *Coffey*, col. 3, line 65, to col. 4, line 3. However, *Coffey* does not recognize the problem of using the SVMR sensor with a magnetic tape recording system, namely the high sensitivity of disk drive read head sensors.

As noted in the Office Action, Coffey does recognize that the use of certain materials in a SVMR sensor may result in an increased anisotropy field strength of the free ferromagnetic layer. See Coffey, col. 2, line 65, to col. 3, line 7. However, *Coffey* also recognizes that an increased anisotropy field is a **problem** and **defect** of the known art. See *Coffey*, col. 2, lines 50-55; col. 3, lines 8-12. That is, *Coffey* suggests that it is desirable to avoid increasing the anisotropy field. In other words, *Coffey* teaches away from deliberately reducing sensitivity of a spin valve sensor by increasing the anisotropy field.

In contradistinction, the present invention deliberately reduces sensitivity of a sensitivity spin valve sensor that senses an applied magnetic field from a **magnetic tape** media. The reduced sensitivity spin valve sensor has a sensitivity that is reduced from a sensitivity of the magnetic disk head spin valve sensor by increasing an effective anisotropy field of a free layer in the reduced sensitivity spin valve sensor by increasing a stiffness of a sensing region of the free layer. Claim 1, for example, recites:

1. An apparatus for reading data, comprising:

a magnetic **tape media** contact surface configured to contact a magnetic tape media; and

a reduced sensitivity spin valve sensor, wherein the reduced sensitivity spin valve sensor senses an applied magnetic field from the magnetic tape media when the magnetic tape media passes by the reduced sensitivity spin valve sensor, wherein the reduced sensitivity spin valve sensor has a sensitivity less than magnetic disk head spin valve sensors, wherein the reduced sensitivity spin valve sensor has a sensitivity that is reduced from a sensitivity of the magnetic disk head spin valve sensor by increasing an effective anisotropy field of a free layer in the reduced sensitivity spin valve sensor, and wherein the effective anisotropy field of the reduced sensitivity spin valve sensor is increased by **increasing a stiffness of a sensing region of the free layer.** [emphasis added]

Coffey does not anticipate claim 1, because *Coffey* does not teach or suggest reducing the sensitivity of a spin valve sensor by increasing the effective anisotropy field of the spin valve sensor by increasing a stiffness of a sensing region of the free layer.

To the contrary, *Coffey* teaches that an increased anisotropy field is a problem or disadvantage of the disclosed invention as a consequence of diffusion of metals into the free layer. In fact, *Coffey* teaches a deliberate reduction in the anisotropy field of the free layer. See *Coffey*, col. 9, lines 51-62.

Independent claim 17 recites subject matter addressed above with respect to claim 1 and is allowable for similar reasons. Since claims 5-9, as well as new claim 33, depend from claim 1 and claims 21-25, as well as new claim 34, depend from claim 17, the same distinctions between *Coffey* and the invention recited in claims 1 and 17 apply for these claims. Additionally, claims 5-9, 21-25, 33, and 34 recite other additional combinations of features not suggested by the reference.

More particularly, with respect to claim 8, Coffey does not teach or suggest using an antiferromagnet to impart a stiffening magnetic field to a sensing region of the free layer. Figure 5 of Coffey is as follows:

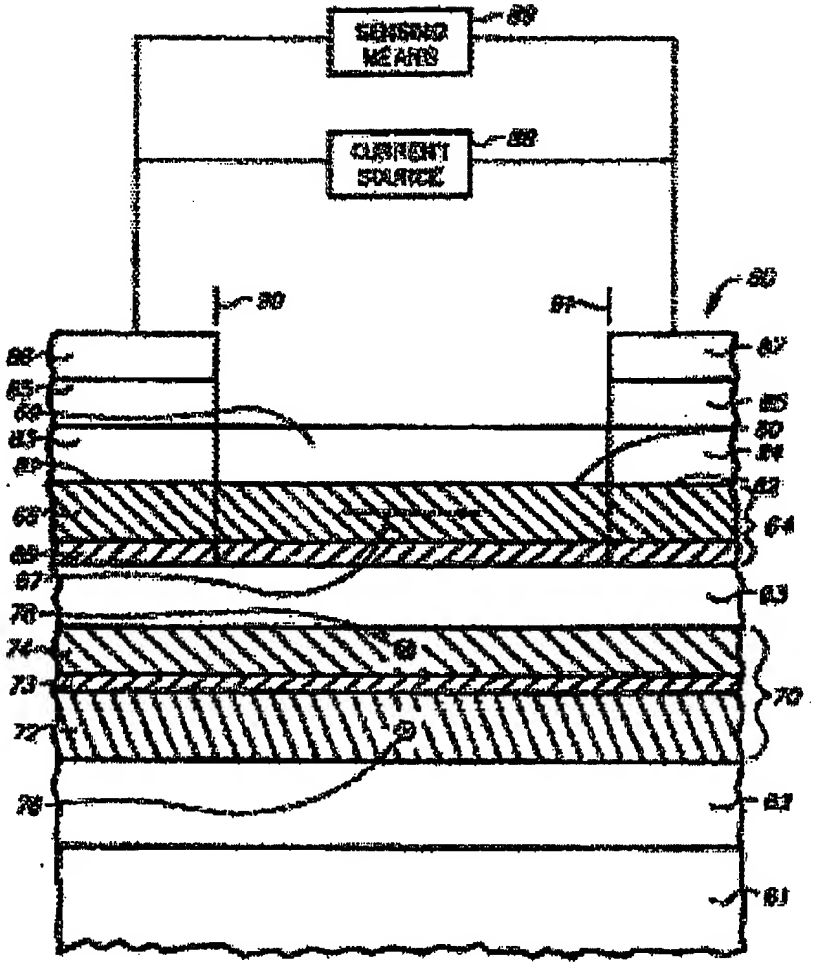

FIG. 5

Coffey shows that antiferromagnets **83, 84** are positioned over extended portions **81, 82** of free layer **64**. Clearly, *Coffey* shows that antiferromagnets **83, 84** are not positioned over the sensing region of the free layer. Thus, *Coffey* does not teach or suggest increasing the stiffness of the **sensing region** of the free layer by using an antiferromagnet to impart a stiffening magnetic field to the **sensing region** of the free layer, as recited in claim 8, for example. In fact, *Coffey* actually teaches away from the present invention. Claims 24, 33, and 34 encompass subject matter addressed above with respect to claim 8 and are allowable for similar reasons.

Therefore, Applicant respectfully requests withdrawal of the rejection of claims 1, 5-6, 8-9, 17, 21-22, and 24-25 under 35 U.S.C. § 102.

Furthermore, *Coffey* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Coffey* actually teaches away from the presently claimed invention because it teaches reducing the anisotropy field of the free layer, as opposed to **increasing** the anisotropy field of a sensing region of the free layer, as in the presently claimed invention. Absent the Office Action pointing out some teaching or incentive to implement *Coffey* to deliberately increase the anisotropy field of a sensing region of the free layer to reduce sensitivity, one of ordinary skill in the art would not be led to modify *Coffey* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Coffey* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the Applicant's disclosure as a template to make the necessary changes to reach the claimed invention.

II. **35 U.S.C. § 103, Obviousness**

The Office Action rejects claims 7 and 23 under 35 U.S.C. § 103 as being unpatentable over *Coffey et al.* (U.S. Patent No. 5,583,725) in view of *Tobise et al.* (U.S. Patent No. 5,748,416). This rejection is respectfully traversed.

Since claims 7 and 23 depend from claims 1 and 17, the same distinctions between *Coffey* and the invention recited in claims 1 and 17 apply for these claims. *Tobise* does not make up for the deficiencies of *Coffey*. Therefore, *Coffey* and *Tobise*, taken alone or in combination, do not teach or suggest each and every limitation of claims 7 and 23. As such, the proposed combination of *Coffey* and *Tobise* does not render claims 7 and 23 obvious.

Therefore, Applicant respectfully requests withdrawal of the rejection of claims 7 and 23 under 35 U.S.C. § 103.

III. Conclusion

It is respectfully urged that the subject application is patentable over the prior art of record and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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